

OPERATOR MANUAL

Basil® 1000

Feeder Bottle Filler

(2004-03-04)

P122994-772

A WORD FROM STERIS CORPORATION

This manual contains important information on proper use and maintenance of the Basil® 1000 Feeder Bottle Filler. **All personnel involved in the use and maintenance of this equipment must carefully review and comply with the warnings, cautions, and instructions contained in this manual.** These instructions are important to protect the health and safety of personnel operating this equipment and should be retained in a conveniently accessible area for quick reference.

Complete instructions for uncrating and connecting utilities, as well as equipment drawings, have been furnished. If missing, contact STERIS for replacement copies, giving the unit serial and model numbers.

STERIS carries a complete line of accessories for use with this equipment. A STERIS representative will gladly review these with you.

Advisory

A listing of the *Safety Precautions* to be observed when operating and servicing this equipment can be found in Section 1 of this manual. Do not operate or service the equipment until you have become familiar with this information.

Any alteration of this equipment not authorized or performed by STERIS which could affect units operation will void the warranty, could violate federal, state and local regulations, and could jeopardize your insurance coverage.

Indications for Use

The Basil 1000 Feeder Bottle Filler is a manifold-type filler designed for filling basket loads of feeder bottles used in the care of laboratory animals.

Service Information

A thorough preventive maintenance program is essential to safe and proper unit operation. This manual contains maintenance schedules and procedures which should be followed for satisfactory equipment performance.

You are encouraged to contact STERIS concerning extended service maintenance agreements to give your unit planned maintenance, assuring equipment performance according to factory specifications. A global network of skilled service specialists can provide periodic inspections and adjustments to assure low-cost peak performance. STERIS can provide information regarding annual maintenance agreements.

See inside back cover for contact information.

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TABLE OF CONTENTS

Section	Title	Page
A	WORD FROM STERIS CORPORATION	i
1	LISTING OF SAFETY PRECAUTIONS AND SYMBOLS	1-1
2	UNCRATING/INSTALLATION INSTRUCTIONS	2-1
2.1	Uncrating Instructions	2-1
2.1.1	Open Crate	2-1
2.1.2	Move Unit and Remove Skid	2-1
2.1.3	Prepare Unit for Installation	2-1
2.2	Installation Instructions	2-3
2.2.1	Before Installing Equipment	2-3
2.2.2	Technical Specifications	2-3
2.2.3	Install Anchorage System	2-4
2.2.4	Connect Utilities	2-4
2.2.5	Cleanup	2-4
2.3	Installation Checklist	2-5
3	COMPONENT IDENTIFICATION	3-1
3.1	Component Identification	3-1
3.2	Controls	3-1
3.3	Accessories	3-2
3.3.1	Filler Header	3-2
3.3.2	Bottle Baskets	3-3
4	OPERATING INSTRUCTIONS	4-1
4.1	Before Operating Equipment	4-1
4.2	Filling the Bottles	4-1
5	ROUTINE MAINTENANCE	5-1
5.1	General	5-1
5.2	Daily Cleaning	5-2
5.3	Weekly Cleaning	5-2
6	TROUBLESHOOTING	6-1
7	REPLACEMENT PARTS AND PRODUCTS	7-1

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LISTING OF SAFETY PRECAUTIONS AND SYMBOLS

1

The following list of *Safety Precautions* **must** be observed when operating and servicing this equipment. WARNINGS indicate the potential for danger to personnel, and CAUTIONS indicate the potential for damage to equipment. These *Safety Precautions* are repeated, where applicable, throughout the manual.

WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD:

-  Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage.
-  Regularly scheduled preventive maintenance, in addition to the faithful performance of the minor maintenance described within this manual, is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.
-  When moving the unit, use a forklift.

WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:

-  Disconnect all utilities to equipment before servicing. Do not service the equipment unless all utilities have been properly locked out. Always follow electrical safety-related work practice standards.
-  Disconnect main power switch before opening cover and working on electrical components.
-  For continued protection against fire hazard replace only with same type and rating of fuse.

WARNING – CHEMICAL BURN EYE AND/OR INJURY HAZARD:

-  Liquid descaler is corrosive and can cause adverse effects to exposed tissues. Do not get in eyes, on skin, or attempt to swallow. Avoid breathing of mists. Read and follow the precautions and instructions on the Descaler label and in the Material Safety Data Sheet (MSDS) prior to use.
-  Wear gloves and eye protection when using a descaling product. Avoid contact with eyes or skin. If spilled or splashed, flush with plenty of water for 15 minutes. If swallowed, do NOT induce vomiting. Administer an alkali with plenty of water. Seek medical attention immediately.

WARNING – LACERATION HAZARD:

-  When removing bolts, wear gloves to protect your hands.

WARNING – HEALTH HAZARD:

-  Vapors from solvent can be harmful. Use with adequate ventilation. Follow directions on the container.

WARNING – SLIPPING HAZARD:

-  To prevent slips, keep floors dry. Promptly clean up any spills or condensation.

(See next page for cautions)

CAUTION – POSSIBLE EQUIPMENT DAMAGE:

-  Use non-abrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool can be harmful to stainless steel. When using Pry Cream, rub in a back-and-forth motion (in same direction as surface grain). Do not rub with a rotary or circular motion.
-  When removing adhesives from stainless steel, use a solvent specially formulated for that purpose. Rub in a back-and-forth motion (in same direction as surface grain). Solvent rubbed in a circular motion or applied with a wire brush or steel wool on assemblies can be harmful to stainless steel. Do not use solvents on painted surfaces.

Symbols

Symbols on the Unit:	
Symbol	Definition
	Warning. Refer to Manual for Further Information.
Symbols on the Crate:	
	TIP'N TELL Indicator. "If TIP'N TELL arrow point is blue, this package has been on its side or tipped over in transit. Make note on bill of lading and check for damage. Any claims for tipping will be based on this notation."
	This Side Up.
	Do Not Stack.
	Fragile.
	Keep Dry.
Information on the Nameplate:	
MOD.	Model of the Unit.
SER.	Serial Number of the Unit.
kV	Power Rating of the Unit.
V	Volt, Number of the Phase (Three or One [blank]) Alternating Current.
A	Amperage Rating of the Unit.
PH/Hz	Hertz – Frequency of the Unit.

2.1 Uncrating Instructions

A room layout, floor plan, and equipment drawing, showing all utility and space requirements, were shipped with the unit. The clearance space, specified on the floor plan, is necessary for proper installation, operation, and maintenance of the unit. If any of these documents are missing or misplaced, contact STERIS, giving the unit serial number and model numbers. Replacement copies will be sent to you promptly.

2.1.1 Open Crate

NOTE: When uncrating unit, note the following:

- 1) Uncrate on a level floor, as close to installing site as possible.
- 2) Crate dimensions are: 51 x 32 x 68" (1295 x 812 x 1727 mm).
- 3) Crate maximum weight is 300 lb (136 kg). Use a forklift to move crates.



WARNING – LACERATION HAZARD: When removing bolts, wear gloves to protect your hands.

1. Verify Tip'N Tell indicator located outside crate (see Figure 2-1). Tip indicator contains a blue compound at the bottom of the indicator. If unit has been tipped, residue from the blue compound will be found higher up in the indicator. If unit has been tipped, notify STERIS and arrange to have a service technician review the equipment and determine if unit was damaged.
2. Assure crate is positioned so it can be opened from the top. Provide a clear work area on all sides.
3. Carefully cut and remove bands from crate. Discard bands before continuing.
4. Using a nail puller, remove and discard top wooden panel.
5. Remove and discard side wooden panels.
6. Remove and discard polystyrene wrap from around unit.

2.1.2 Move Unit and Remove Skid



WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: When moving the unit, use a forklift.

1. With the unit still mounted on the skid, position forklift under unit frame and move unit to installation site.
2. Unscrew and discard lag bolts holding anchorage brackets to skid.
3. Pull out and discard base.

2.1.3 Prepare Unit for Installation

1. Remove all tape and/or foam packing from Bottle Filler.
2. Remove tape securing drain cap to sump.
3. Slide Filler Header Manifold (accessory) into connection.



Figure 2-1. Crate

2.2 Installation Instructions

2.2.1 Before Installing Equipment

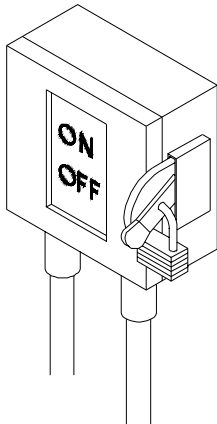


Figure 2-2. Disconnect Switch

1. Review the installation requirements:
 - a. Clearance - The clearance space shown on the equipment drawing indicates the space necessary for easy installation and proper operation and maintenance of the Basil® 1000 Feeder Bottle Filler.
 - b. Utility service lines:
 - Disconnect switch (not by STERIS) must be installed in the electric supply line near the bottle filler (see Figure 2-2). Disconnect switch must be capable of being locked in the OFF position only.
 - If this machine is installed next to other equipment, disconnect switch should be located so that service can be shut off to one piece of equipment at a time.
 - Utility service requirements are as shown on the equipment drawing. Verify the equipment drawing or identification plate (located over electrical box cover) for proper voltage.
2. Assure the unit is placed, as shown on equipment drawing, in correct relation to building supply lines.
3. Verify that the bottle filler is level.
 - a. Place a spirit level end-to-end and side-to-side on top of filling area.
 - b. If necessary, level the unit end-to-end and side-to-side, by adjusting the leveling legs.
4. Unit is installed on Non-slip floor surface.

2.2.2 Technical Specifications

These specifications are intended to describe the technical information given on the nameplate of your unit and to state other relevant information. Verify Equipment Drawing or nameplate, for proper voltage and amperage.

• Voltage, Amperage, and Power Consumption

The **Basil 1000 Feeder Bottle Filler** operates on:

- 120 V~, 60 Hz, 1-phase, 2-wire
- Maximum current and power consumptions are:
 - 120 V~, 1A, 0.12 kW

• Permissible Environmental Conditions

This equipment is designed to give optimal results in an indoor environment where temperature is maintained between 41-104 °F (5-40 °C) and where maximum relative humidity is 80% for temperatures up to 88 °F (1 °C) decreasing linearly to 50% relative humidity at 104 °F (40 °C).

• Seismic Anchorage System

A Seismic Tie Down System is available for high risk seismic zones.

2.2.3 Install Anchorage System

Once unit is level, install anchorage system as follows:

1. Mark floor holes position. (If anchoring brackets do not touch the floor use shims.)
2. Using a forklift, move the unit to clear area.
3. Drill holes in floor.
4. Using a forklift, bring unit back into position.
5. Bolt brackets into position using bolts provided.

2.2.4 Connect Utilities

1. **DRAIN** - Connect building waste line to unit drain line.
2. **COLD WATER** - Connect cold water supply line from building to unit as described in the Equipment Drawing.
3. **ELECTRICITY** - Connect building electrical supply line to unit electrical supply box as described in the Equipment Drawing.

2.2.5 Cleanup

1. Remove any adhesive found on panels with a small amount of nonflammable cleaning solvent. Keep solvents away from all painted surfaces or damage may result.
2. Remove all protective paper from the unit cabinet panels. Slowly peel paper away from stainless steel to reduce the level of static discharge.
3. Inspect filler head and filling area to assure all materials used during installation have been removed.



WARNING – HEALTH HAZARD: Vapors from solvent can be harmful. Use with adequate ventilation. Follow directions on the container.



CAUTION – POSSIBLE EQUIPMENT DAMAGE: When removing adhesives from stainless steel, use a solvent specially formulated for that purpose. Rub in a back-and-forth motion (in same direction as surface grain). Solvent rubbed in a circular motion or applied with a wire brush or steel wool on assemblies can be harmful to stainless steel. Do not use solvents on painted surfaces.

THIS COMPLETES THE INSTALLATION. Before operating equipment, confirm that all items on installation checklist have been satisfactorily implemented and operational test is conducted by a qualified service technician. Follow procedure described in Section 4.2, *Filling the bottles*.

2.3 Installation Checklist

After installing the unit, complete the following checklist to assure complete and correct installation. Contact STERIS to schedule a demonstration of proper equipment operation.

- ☐ Shutoff valve (not provided by STERIS), for maintenance purposes, is installed on the water line and is in compliance with local codes.
- ☐ Disconnect switch, capable of being locked in OFF position only, is installed on electrical supply line near the unit and in compliance with local codes.

NOTE: If unit is installed next to other equipment, shutoff valve and disconnect switch should be located so that service can be shut off to one piece of equipment at a time.

- ☐ Feeder Bottle Filler is positioned, as shown on floor plan, with required clearance space and in relation to building water supply line.
- ☐ Feeder Bottle Filler is level. If necessary, use adjustable legs and/or add shims (not included) to level unit.
- ☐ Building waste line is connected to unit as specified on equipment drawing.
- ☐ Non-slip floor surface (not provided by STERIS) installed around unit.

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3.1 Component Identification

Become familiar with all component and control locations and functions before operating the Basil® Feeder Bottle Filler (see Figure 3-1).

3.2 Controls

See Figures 3-1 and 4-1.

Electrical control panel is composed of the following elements:

- **Main Power ON/OFF selector switch;**
- **START-MAN Pushbutton** - For manual operation, press and hold green lighted pushbutton to obtain desired filling level for bottles;
- **START-AUTO Pushbutton** - For automatic operation, press blue lighted pushbutton to activate timer;
- **Timer** - Set desired filling time to automatically fill the bottles.

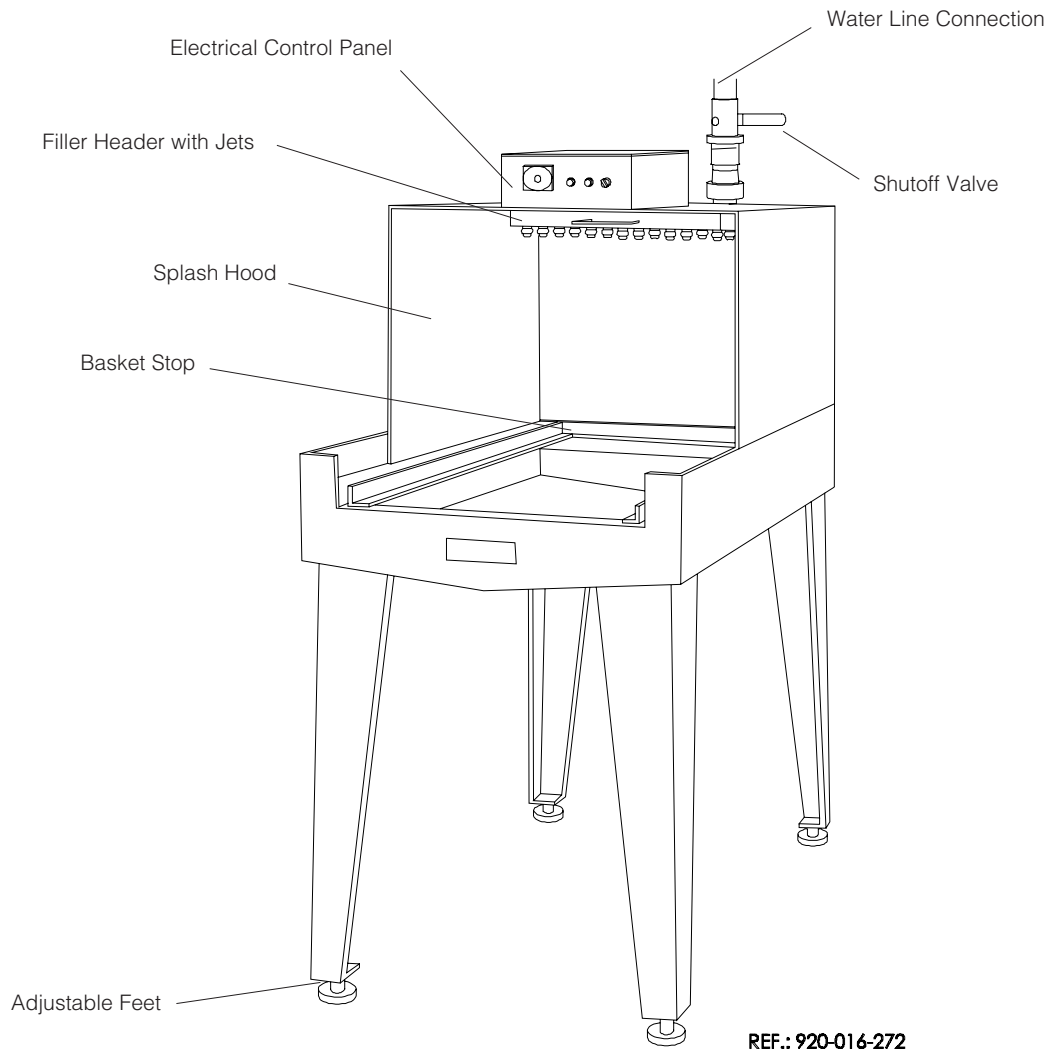


Figure 3-1. Basil 1000 Feeder Bottle Filler

3.3 Accessories

Stainless-steel manifold headers can accommodate different bottle/basket sizes. Each manifold has individual stainless-steel jets for each bottle. It connects to Bottle Filler by a quick-disconnect clamp.

3.3.1 Filler Header

- **5 x 5 Filler Header** (Figure 3-2):

Dimensions: 14-3/4 x 16-3/4 x 2-3/4" (370 x 430 x 70 mm)

Coverage: 25 bottles

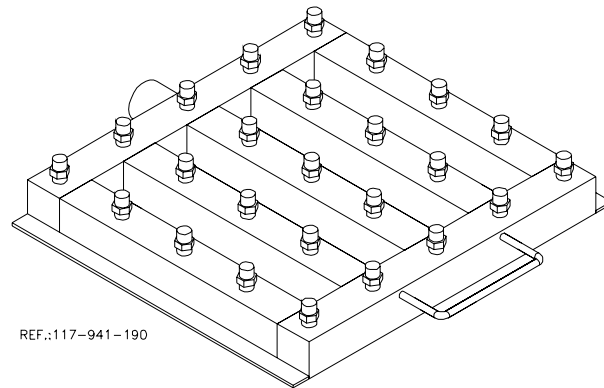


Figure 3-2. 5 x 5 Filler Header

- **4 x 6 Filler Header** (Figure 3-3):

Dimensions: 11-1/2 x 20-1/2 x 2-3/4" (290 x 520 x 70 mm)

Coverage: 24 bottles

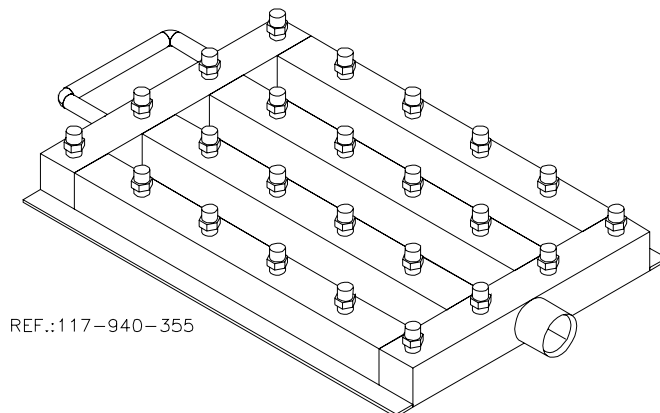
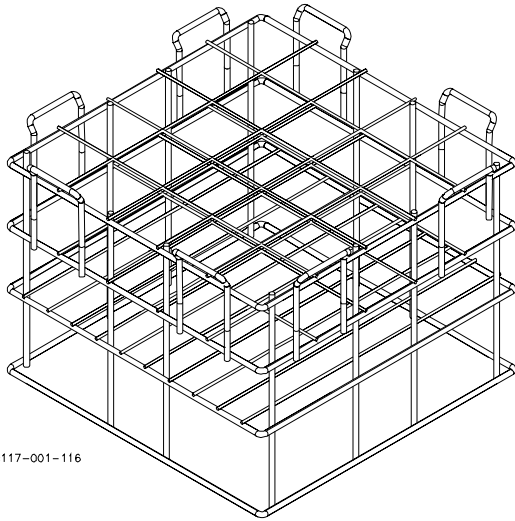


Figure 3-3. 4 x 6 Filler Header

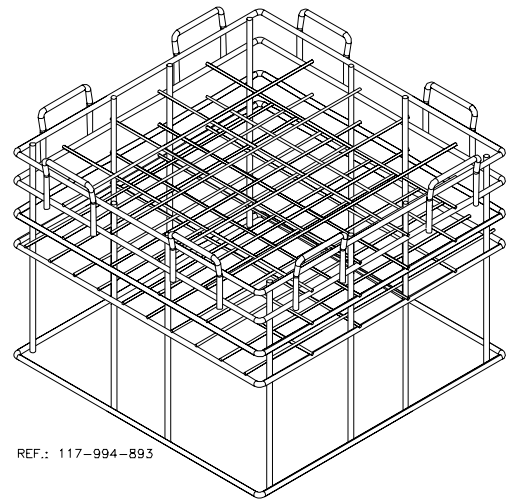
3.3.2 Bottle Baskets

Stainless-steel bottle baskets can accommodate different bottle sizes. Refer to Figures 3-4 through 3-7



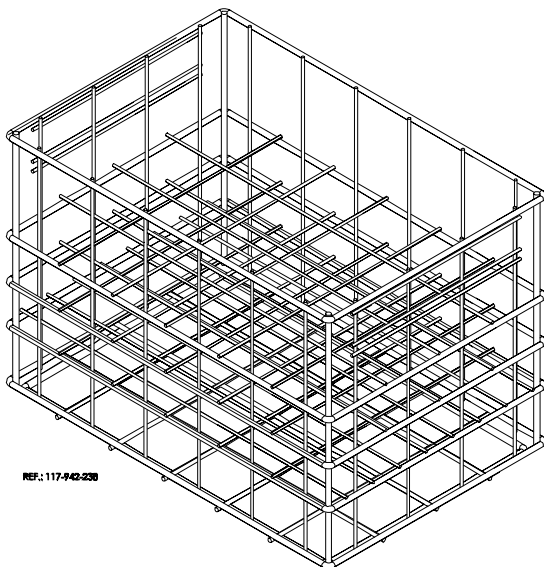
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**Figure 3-4. 5 x 5 Bottle Basket
(16 oz bottles [454 mL])**



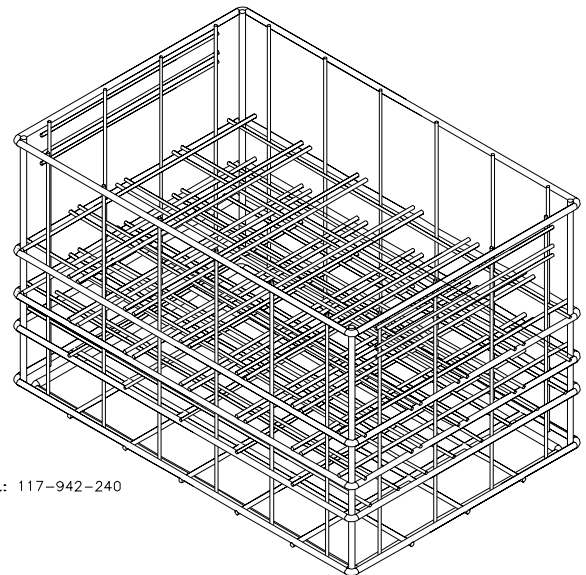
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**Figure 3-5. 5 x 5 Bottle Basket
(8 oz bottles [227 mL])**



REF.: 117-942-238

**Figure 3-6. 4 x 6 Bottle Basket
(16 oz bottles [454 mL])**



REF.: 117-942-240

**Figure 3-7. 4 x 6 Bottle Basket
(8 oz bottles [227 mL])**

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4.1 Before Operating Equipment

NOTE: Refer to Section 3 for location of components.

Check that unit shutoff valve (water) is open.

4.2 Filling the Bottles



WARNING – SLIPPING HAZARD: To prevent slips, keep floors dry. Promptly cleanup any spills or condensation.

See Figure 4-1

1. Place a basket of clean bottles under the filler header manifold up to the basket stops.

2. Fill all bottles simultaneously as follows:

• Manual Operation

a. Turn Main Power ON/OFF selector switch to ON position.

b. Press and hold START-MAN button (green) until desired filling level for bottles is reached. Release button

• Automatic Operation

a. Turn Main Power ON/OFF selector switch to ON position.

b. Set timer to desired filling time.

c. Press START-AUTO button (blue) to activate timer and start filling the bottles. If the timer is set properly, it times out as bottles are filled.

NOTE: To set, turn the timer knob to the desired time necessary to fill bottles (time may vary depending on size of bottles). A few trials with a basket in the filling area may be necessary to determine the appropriate fill time.

d. Remove basket of filled bottles.

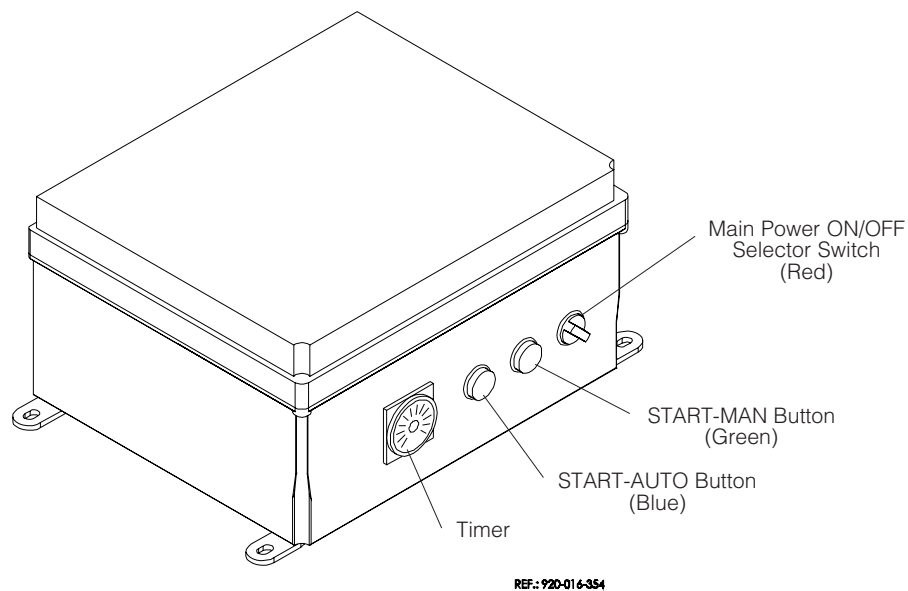


Figure 4-1. Control Panel

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5.1 General



WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Regularly scheduled preventive maintenance, in addition to the faithful performance of the minor maintenance described within this manual, is required for safe and reliable operation of this equipment. Contact STERIS to schedule preventive maintenance.

Procedures described in this section should be performed at regular intervals as indicated. Local conditions (water quality, usage, etc.) may require more frequent maintenance than indicated. Customer should maintain a record of all maintenance procedures performed on the unit.

Should a problem occur, refer to Section 6, *Troubleshooting*. Refer to Section 7, *Replacement Parts and Products*, for replacement parts list.

NOTE: *Never permit unqualified persons to service the bottle filler.*

STERIS recommends use of the following cleaning products (see **Table 7-2** for ordering information):

- **Amscrub™ Multipurpose Cleaner** - for routine cleaning and polishing of unit.
- **Pry® Stain Remover Cream** - for stubborn stains.
- **Stainless Steel Cleaner** - for cleaning stainless-steel surfaces.
- **Liquid Descale Liquid Scale Remover** - for removing scale and other hard-water deposits from unit.



WARNING – CHEMICAL BURN AND/OR EYE INJURY HAZARD: Wear gloves and eye protection when using a descaling product. Avoid contact with eyes or skin. If spilled or splashed, flush with plenty of water for 15 minutes. If swallowed, do NOT induce vomiting. Administer an alkali with plenty of water. Seek medical attention immediately.

- Liquid descaler is corrosive and can cause adverse effects to exposed tissues. Do not get into eyes, on skin, or attempt to swallow. Avoid breathing of mists. Read and follow the precautions and instructions on the descaler label and in the Material Safety Data Sheet (MSDS) prior to use.

NOTE: *Follow manufacturer's recommendations for proper product use (concentrations, precautions to be taken, etc.). Be sure to read the MSDS for safety information.*

5.2 Daily Cleaning



CAUTION – POSSIBLE EQUIPMENT DAMAGE HAZARD: Use non-abrasive cleaners when cleaning unit. Follow directions on containers and rub in a back-and-forth motion (in same direction as surface grain). Abrasive cleaners will damage stainless steel. Cleaners rubbed in a circular motion or applied with a wire brush or steel wool can be harmful to stainless steel. Do not use these cleaners on painted surfaces. When using Pry Cream, rub in a back-and-forth motion (in same direction as surface grain). Do not rub with a rotary or circular motion.

At the end of each day, visually inspect each filler manifold jet by looking into the opening of each jet or by observing the spray pattern of each jet during operation. If a jet appears to be plugged or partially blocked, proceed as follows:

1. Push a wire (of smaller diameter than the jet orifice) through each jet that appears to be plugged.
2. Remove jet from each corner and turn unit on.
3. Replace jets and test for additional blockage.
4. If blockage remains, repeat process until jets are clear.
5. Remove plug from drain to drain accumulated water from sump.
6. Using a damp cloth or sponge, apply cleaner on sump panels in a back-and-forth motion.
7. Thoroughly wipe off cleaner.

5.3 Weekly Cleaning



WARNING – CHEMICAL BURN AND/OR EYE INJURY HAZARD: Wear gloves and eye protection when using a descaling product. Avoid contact with eyes or skin. If spilled or splashed, flush with plenty of water for 15 minutes. If swallowed, do NOT induce vomiting. Administer an alkali with plenty of water. Seek medical attention immediately.

- Liquid descaler is corrosive and can cause adverse effects to exposed tissues. Do not get into eyes, on skin, or attempt to ingest by mouth. Avoid breathing of mists. Read and follow the precautions and instructions on the descaler label and in the Material Safety Data Sheet (MSDS) prior to use.

1. Clean Basil® 1000 Feeder Bottle Filler exterior, using Amscrub for general stains and Pry Stain Remover Cream for stubborn stains.
 - a. Using a damp cloth or sponge, apply cleaner in a back-and-forth motion, in same direction as surface grain.
 - b. Thoroughly wipe off cleaner.
 - c. Polish surface with a clean, dry, lint-free cloth.

2. Remove hard water deposits from unit as follows:

NOTE: Depending on hardness of water being used, it may be necessary to remove hard water deposits more often. Remove deposits from surfaces and accessories whenever deposits become visible.

- a. Wearing proper safety protection (i.e., protective clothing, gloves, and face shield), pour Liquid Descale onto damp cloth.
- b. Apply descaler in a back-and-forth motion, in the same direction as the surface grain.
- c. Thoroughly wipe off descaler and polish surface with a clean, dry, lint-free cloth.
- d. Rinse with tap water and let unit air dry.

⚠ WARNING – PERSONAL INJURY AND/OR EQUIPMENT DAMAGE HAZARD: Only fully qualified service personnel should assemble and/or make adjustments to this equipment. Assembly or adjustments done by inexperienced, unqualified personnel could cause personal injury or result in costly damage.

⚠ WARNING – ELECTRIC SHOCK AND/OR BURN HAZARD:

- **Disconnect all utilities to equipment before servicing. Do not service the equipment unless all utilities have been properly locked out. Always follow electrical safety-related work practices and standards.**
- **Disconnect main power switch before opening cover and working on electrical components.**
- **For continued protection against fire hazard, replace only with same type and rating of fuse.**

⚠ WARNING – SLIPPING HAZARD: To prevent slips, keep floors dry. Promptly clean up any spills or condensation.

This section describes the types of Basil® 1000 Bottle Filler malfunctions that can occur and indicates probable causes and corrective actions.

If you are unable to correct the problem by using the Troubleshooting Table, or if a problem occurs that is not described in the table, please contact STERIS. A factory-trained technician will promptly place your bottle filler in proper working order. Service charges may be incurred. Consult your warranty for details.

NOTE: Never permit unqualified persons to service the bottle filler.

Table 6-1. Troubleshooting

Problem	Probable Cause/Corrective Action
1. When Main Power ON/OFF selector switch is in ON position, bottle filler does not operate (red light on selector switch is not turned on).	1. Check fuse; replace if necessary. 2. Call STERIS*.
2. No water coming out of spraying jets.	1. Press START-MAN button (green). If no water comes out, jets may be clogged - clean jets as necessary (see Section 5). 2. Fill valve is faulty. Call STERIS*. 3. Call STERIS*.

** Service charges may be incurred. Consult your warranty for details.*

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To order replacement parts and/or supply products, proceed as follows:

1. Include the description and part/order number as listed in **Table 7-1** and **Table 7-2**.
2. Include the model and serial numbers of your bottle filler on your order.
3. Send your order directly to the STERIS sales and service center serving your area.

Contact STERIS if you need parts that are not listed below.

NOTE: Use only STERIS authorized parts on this equipment. Use of unauthorized parts will void the warranty.

Table 7-1. Replacement Parts

Part Number			Description
			Pneumatics
P	117951	157	STRAINER, 3/4", WATER 7021007
P	117904	009	VALVE, SOLENOID, S/S, 3/4" NPT
P	117950	631	VALVE, BALL, S/S, 3/4" NPT
P	117940	022	WATER HAMMER ARRESTOR, 1/2" NPT #15 WATTS
P	117941	092	SPRAY JET, S/S, 1/4" #US0015
			Electrical
P	117913	096	LED, RED, 120V #M22-LED230-R
P	117930	079	HEAD, ILLUMINATED BUTTON GREEN #M22-DL-G
P	117913	020	TIMER MULTI-FUNCTION NEMA4X B846-500
P	117940	714	FUSE, 0.5A, BUSS #MDL-1/2
P	117913	095	BUTTON, SEL, 2 POS, ILLUMINATED #M22-WRLK-R
P	117913	080	LED, GREEN, 120V #M22-LED230-G
P	117913	092	LED, BLUE, 120V #M22-LED230-B
P	117913	094	HEAD, BUTTON, ILLUMINATED, BLUE #M22-DL-B
P	117913	081	CONTACT BLOCK N.O. ASS #M22-AK10

Table 7-2. Cleaning Products

Description	Quantity	Order No.
Amscrub™ Multipurpose Cleaner	32 oz, 12 per case	NM400
Liquid Descale Liquid Scale Remover	1 gal, 4 per case	1051-08
Pry® Stain Remover Cream	12 oz, 12 per case	NM430
Stainless Steel Cleaner	18 oz can, each	NM410

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Contact Information:

Sales and Service:

STERIS Corporation
5960 Heisley Road
Mentor, Ohio 44060
Tel.: 440 354 2600
Fax : 440 639 8199

Technical Assistance:

STERIS Engineering Services
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Erie, PA 16506
Tel.: 814 452 3100
Fax: 814 870 8400

Manufacturer:

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